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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/804,083 | 03/13/2001 | Katsutoshi Nosaki | 107348-00096 | 9107 |

7590

06/28/2002

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| EXAMINER | - |
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PARSONS, THOMAS H

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| ART UNIT | PAPER NUMBER |
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1741

DATE MAILED: 06/28/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

MF-8

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|------------------------------|------------------------|--|---------------------|--|
| Office Action Summary | Application No. | | Applicant(s) | |
| | 09/804,083 | | NOSAKI ET AL. | |
| | Examiner | | Art Unit | |
| | Thomas H Parsons | | 1741 | |

-- **Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --**
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 April 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: |

Response to Amendment

This is in response to the amendment filed 30 April 2002. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

1. The rejection of Claims 1-5 under 35 U.S.C. 103(a) as being unpatentable over Suga et al. (5,667,647), and further in view of Dankese (4,243,508) has been **maintained** as set forth in the previous office action.

NEW DETAILED ACTION

2. 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suga et al. (5,667,647), and further in view of Dankese (4,243,508), and further in view of Oshima et al. (5,401,371).

Suga et al. and Dankese are as applied, argued and disclosed in the previous office action, and incorporated herein.

The Suga et al. combination does not disclose the limitations of the water electrolytic cells, the cathode and the anode as recited in the instant claims.

Oshima et al. in Figures 1 and 2 discloses a laminated water electrolytic cell wherein the cathode (27) and the anode (35) are plate shaped (col. 6:35-col. 8:68).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the apparatus of the Suga et al. combination by substituting the anode and cathode with the laminated anode and cathode of Oshima et al. because Oshima et

al. teach laminated electrolytic cells capable of being stacked that would have provided a means for supplying water evenly regardless of fluctuations in the gas generating capabilities among the cells thereby securing a predetermined overall gas generating capability.

Response to Arguments

3. Applicants' arguments filed 30 April 2002 have been fully considered but they are not persuasive.

A. The Applicants argue on page 4, lines 4-11 that changing the interior surface of the Suga et al. apparatus to be a polymer rather than metal would render the modified Suga et al. apparatus unsatisfactory for its intended purpose as the interior surface would not be able to perform as an electrode as required.

In response, the teachings of Dankese are not being relied upon to change the metal coated interior surface of the Suga et al. apparatus rather Dankese it being relied upon for its teaching of an ion exchange membrane for use in an electrochemical (electrolysis apparatus). The ion exchange membrane of Suga et al. is sandwiched between wall structures; replacing the membrane of Suga et al. with that of Dankese would not impact the metal coated interior wall structures.

Suga et al. teaches an ion exchange membrane for water electrolysis but does not teach a solid polymer ion exchange membrane. Dankese teaches a solid polymer ion exchange membrane also for use in water electrolysis. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the apparatus of Suga et al. by substituting the ion exchange film with the solid polymer ion exchange membrane

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of Dankese because Dankese teaches on col. 1:67-62 a solid polymer ion exchange membrane that would have provided both improved low permeability and low electrical resistivity characteristics thereby improving the efficiency of the apparatus.

B. The Applicants on page 4, lines 12-16 are arguing hindsight.

In response to applicants' argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

C. The Applicants on page 4, lines 17-22 argues a hypothetical plane. Suga et al. in Figure 2 shows a plurality of electrolytic cells positioned back-to-back on a parallel plane wherein the anode, the ion exchange membrane and the cathode are developed on plans that are parallel to one another. In addition, Figure 3 shows 5 rows of electrolytic cells wherein each row comprises three electrolytic cells and further the rows are arrange in parallel to one another.

D. Applicants also argues that by virtue of these planes the thickness of the entire electrolytic apparatus can be made rather small.

In response, the Applicants have not present any evidence as to the criticality of size and how it further improves the performance of the overall performance. In *Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied, 469 U.S. 830, 225 USPQ 232 (1984), the Federal Circuit held that, where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device.

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas H Parsons whose telephone number is (703) 306-9072. The examiner can normally be reached on M-F (7:00-4:30) First Friday Off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (703) 308-3322. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.


NAM NGUYEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700

Thomas H Parsons
Examiner
Art Unit 1741

June 26, 2002